TR-rec 2/3/93

6C

Golder Associates Inc.

3730 Chamblee Tucker Road
Atlanta, GA USA 30341
Telephone (404) 496-1893
Fax (404) 934-9476

Golder Associates

January 15, 1993

893-3803.4

PE93-01/15/93

PRD 980 594 709

BFI of Ponce, Inc.
Browning-Ferris Industries
8607 Roberts Drive
Atlanta, GA 30350

Attention: Mr. William Crumley

RE: LETTER REPORT ON
ADDITIONAL GEOLOGIC BORING GW-9
BFI PONCE MUNICIPAL LANDFILL, PONCE, PUERTO RICO
RCRA PERMIT NUMBER: PRD980594709

Gentlemen:

Pursuant to Module V of the Final RCRA Post-Closure Permit, effective November 12, 1991, we herein submit on behalf of BFI of Ponce, Inc., the results of the additional geologic boring program completed near the Ponce Municipal Landfill, Ponce, Puerto Rico. This additional geologic boring, designated GW-9, was installed to fulfill requirements identified in the Final Post-Closure Permit (Module V, page 1). The additional geologic boring investigation was conducted in accordance with the workplan dated February 7, 1992, entitled "Work Plan for an Additional Geologic Boring" (Workplan), and the letter sent to the Agency (Mr. Mike Poetzsch) dated April 1, 1992. The geologic boring GW-9 was drilled to a total depth of 302 feet Below Ground Surface (ft.BGS) (92 meters) at horizontal coordinates N. 19,500; E. 129, 120 (meters) (see Figure 1; Table 1). Attachment 1 to this letter provides the geologic log for boring GW-9, and Attachment 2 is a letter from the licensed surveyor who verified the horizontal coordinates and elevation.

As discussed in the Workplan, the reasons for the installation of GW-9 at the specified location were:

- Establish the thickness of the Ponce Formation and elevation of the Ponce/Juana Diaz Formational contact at this location;
- Determine the elevation of groundwater at this location; and
- Verify the fault geometry near this location.

This information was required to verify that the conceptual hydrogeologic model presented in the RFA Hydrogeologic Evaluation Report dated June 1990 extends from the site area to GW-9 with a high degree of certainty.

Attachments:

Table 1 - Geologic Field Data

Figure 1 - Geologic Data Map
Figure 2 - Fault Exposure Near Geologic Boring GW-9
Figure 3 - Slickensides Near Fault Trace South of Geologic Boring GW-9 (Looking North)
Figure 4 - Fault Trace Near Geologic Boring GW-9 (Looking West)

Attachment 1 - Geologic Log for Boring GW-9
Attachment 2 - Survey Information
Attachment 3 - Geologic Boring GW-9 Rock Core Photographs

FN: GW-9-BFI.LTR\16\MAA

TD-rec 2/3/93

6C

Golder Associates Inc.

3730 Chamblee Tucker Road
Atlanta, GA USA 30341
Telephone (404) 496-1893
Fax (404) 934-9476

Golder Associates

January 15, 1993

893-3803.4

PEG3-01/15/93

PRD 980594709

BFI of Ponce, Inc.
Browning-Ferris Industries
8607 Roberts Drive
Atlanta, GA 30350

Attention: Mr. William Crumley

RE: LETTER REPORT ON
ADDITIONAL GEOLOGIC BORING GW-9
3FI PONCE MUNICIPAL LANDFILL, PONCE, PUERTO RICO
RCRA PERMIT NUMBER: PRD980594709

Gentlemen:

Pursuant to Module V of the Final RCRA Post-Closure Permit, effective November 12, 1991, we herein submit on behalf of BFI of Ponce, Inc., the results of the additional geologic boring program completed near the Ponce Municipal Landfill, Ponce, Puerto Rico. This additional geologic boring, designated GW-9, was installed to fulfill requirements identified in the Final Post-Closure Permit (Module V, page 1). The additional geologic boring investigation was conducted in accordance with the workplan dated February 7, 1992, entitled "Work Plan for an Additional Geologic Boring" (Workplan), and the letter sent to the Agency (Mr. Mike Poetzsch) dated April 1, 1992. The geologic boring GW-9 was drilled to a total depth of 302 feet Below Ground Surface (ft.BGS) (92 meters) at horizontal coordinates N. 19,500; E. 129, 120 (meters) (see Figure 1; Table 1). Attachment 1 to this letter provides the geologic log for boring GW-9, and Attachment 2 is a letter from the licensed surveyor who verified the horizontal coordinates and elevation.

As discussed in the Workplan, the reasons for the installation of GW-9 at the specified location were:

- Establish the thickness of the Ponce Formation and elevation of the Ponce/Juana Diaz Formational contact at this location;
- Determine the elevation of groundwater at this location; and
- Verify the fault geometry near this location.

This information was required to verify that the conceptual hydrogeologic model presented in the RFA Hydrogeologic Evaluation Report dated June 1990 extends from the site area to GW-9 with a high degree of certainty.

GW-9 Installation Procedures

Geologic boring GW-9 was drilled and continuously sampled on October 29 and 30, 1992 using a dual tube reverse rotary circulation drilling method. GW-9 was initiated at a ground surface elevation of 95.25 meters mean sea level (MSL) and was completed at an elevation of 3.2 meters MSL (approximately 92 meters in depth). Prior to the onset of drilling, all drilling equipment (drilling rig, drill rods, bits, wrenches, etc.) used near or down boring GW-9 were decontaminated in accordance with the procedures presented in Attachment IV-2 of the Permit.

During drilling, soil/rock sampling and logging was also completed in accordance with the Permit. In general, as the soil/rock samples exited the drilling rig cyclone, they were placed in appropriate labeled sample boxes for geologic logging (description).

Drilling was supervised, and geologic logging was performed, by Mr. Frederick Booth and Mr. William Gierke, both registered professional geologists of Golder Associates Inc. Upon completion of the geologic logging, each sample box was photographed. Attachment 3 to this letter provides photographs of the soil/rock samples in the appropriate sample boxes.

As discussed in the Sixth Bi-monthly Progress Report (November 9, 1992), the results from GW-9 indicate that the conceptual hydrogeologic model prepared for the facility is confirmed. During drilling, a clay marker bed which is continuous in the Ponce Formation was encountered at an approximate depth of 25 meters below ground surface, groundwater was first encountered at a depth of 86.0 meters below ground surface (elevation 9.3 meters MSL) and the Ponce/Juana Diaz formational contact was encountered at 86.9 meters below ground surface (elevation 8.4 meters MSL). The clay marker bed (see Attachment 1) was encountered within about 5 meters of an elevation line extrapolated from boreholes GW-2 and GW-3 to GW-9. The consistency of the extrapolated marker bed is an indication of the continuity of the Ponce Formation north of the fault splay.

At completion of drilling, the groundwater depth was measured in the boring through the drill rods and found to be at approximately elevation 5.0 meters MSL. After allowing the groundwater to stabilize in borehole for approximately 12 hours, the groundwater had risen in the borehole to an elevation of 12.1 meters MSL. Because the Ponce Formation has a high hydraulic conductivity (on the order of 10^{-3} cm/s), this time period (12 hours) is considered to be sufficient for groundwater level stabilization to static conditions.

In telephone discussions with the Agency (Mr. Timothy Gordon) during the drilling of GW-9 and as discussed in the Workplan approved by the Agency, encountering the Ponce/Juana Diaz formational contact below ten meters MSL, and a static water level at an elevation below 20 meters MSL would be sufficient to substantiate the conceptual hydrogeologic model for the site. As discussed above, the Ponce/Juana Diaz contact was encountered at 8.4 meters MSL and the water elevation was measured to be 12.1 meters MSL. Therefore, with the concurrence of the Agency (Mr. Timothy Gordon) prior to sealing/abandonment of boring GW-9, it was decided that a monitoring well was not needed at the GW-9 boring location. Accordingly, boring GW-9 was sealed with pure bentonite grout on October 31, 1992 by pumping bentonite grout into the boring through the inside of the drilling rods (tremie grout method). Approximately three feet of the

bentonite grout was removed near the ground surface and replaced with cement grout for stability purposes.

Geologic Mapping

Prior to and during the drilling of geologic boring GW-9, additional geologic mapping was completed to provide a more complete geologic model of the fault system near boring GW-9. Figure 1 provides a revised placement of the inferred fault trace near GW-9. This revised placement moves the fault trace about 110 meters north of the location presently shown in the permit. Recent excavations in this area have exposed the basal portion of the Ponce Formation near the fault zone, which allowed for direct observation and measurement of the fault trace. Map station number 11 shown on Figure 1 was identified in the field as being located on the fault trace. This point was located on the map by azimuth triangulation (corner of construction company building for first point and corner of rifle range building for second point).

Figures 2 and 4 show photographs of two different views of the major fault trace, Figure 2 is a view looking north and Figure 4 presents a view of the major fault trace and a minor fault trace, both near GW-9 (looking west). Figure 3 presents a photograph of slickensides near the major fault trace. The major and minor fault traces were defined in the field as having displacements of about 70 meters and about three meters, respectively. The major fault displacement has been estimated using the elevation of the basal Ponce Juana Diaz contact shown on Figure 2 and the elevation of the Ponce/Juana Diaz contact in boring GW-9, while the minor fault displacement was observed in outcrop in the field.

Conclusions

The results of the additional geologic mapping and the geologic boring GW-9 confirm that the geometry of the fault zone inferred at the site, which was encountered in borings GW-1 and GW-4, is continuous east of the site. Therefore, groundwater within the fault splay remains isolated from groundwater in the Ponce Formation north of the fault splay. In summary, the results of the additional geologic boring investigation confirm the site conceptual model presented in the June 1990 Hydrogeologic Evaluation, and suggest that site conditions have been fully characterized.

Very truly yours,

GOLDER ASSOCIATES INC.

Frederick M. Booth, P.G.
Project Geological Engineer

Ray Pearson, P.G.
Principal

FMB/RP:maa

cc: William G. Gierke
Bruce Jernigan

Attachments: Table 1 - Geologic Field Data

Figure 1 - Geologic Data Map
Figure 2 - Fault Exposure Near Geologic Boring GW-9
Figure 3 - Slickensides Near Fault Trace South of Geologic Boring GW-9 (Looking North)
Figure 4 - Fault Trace Near Geologic Boring GW-9 (Looking West)

Attachment 1 - Geologic Log for Boring GW-9
Attachment 2 - Survey Information
Attachment 3 - Geologic Boring GW-9 Rock Core Photographs

FN: GW-9-BFI.LTR\16\MAA

TABLE 1
GEOLOGIC FIELD DATA

MAP STATION NO. (FIGURE 1)	STATION DESCRIPTION
1	Outcrop of massive Ponce Limestone, very fossiliferous and hard (resistant). Strike 70°, dip 15°S - bedding Strike 64°, dip 75°W - joint face
2	Ponce Limestone outcrop, very fossiliferous limestone, no bedding features.
3	Ponce Limestone outcrop, massive with abundant fossils-near vertical cut/cliff face.
4	Small outcrop of light-tan siltstone, Juana Diaz formation in stream bed. No fossils. Outcrop surrounded by alluvial soils - gravel, cobbles and sand and silt. Strike 286°, dip 25°S - bedding
5	Juana Diaz outcrop in stream bed - same as station 4. No fossils. Strike 282°, dip 25°S - bedding
6	Juana Diaz outcrop in stream bed, light tan on weathered surface, grayish-green on fresh/moist surface. Strike 303°, dip 17°S - bedding Outcrop of massive sparry (crystalline) Ponce La. very fossiliferous about 100 feet northeast of station 6. Basal Ponce La. which is about 40 feet to 50 feet higher in elevation than station 6.
7	Bedded Ponce Limestone with thin bedded mudstone/siltstone. This outcrop is about 20 feet higher in elevation than the previous basal Ponce outcrop of massive La. Strike 280°, dip 17°S-bedding
8	End of drainage/intermittent stream; no seeps observed along the entire length of drainage.
9	Manhole location (approx.)
10	Manhole location (approx.)
11	Triangulation Point on the fault trace.
12	Photograph of fault trace looking west (Figure 4).
13	Photograph of fault exposure looking north (Figure 2).
GW-9	Geologic Boring GW-9.

WEST

EAST

SLICKENSIDE LOCATION

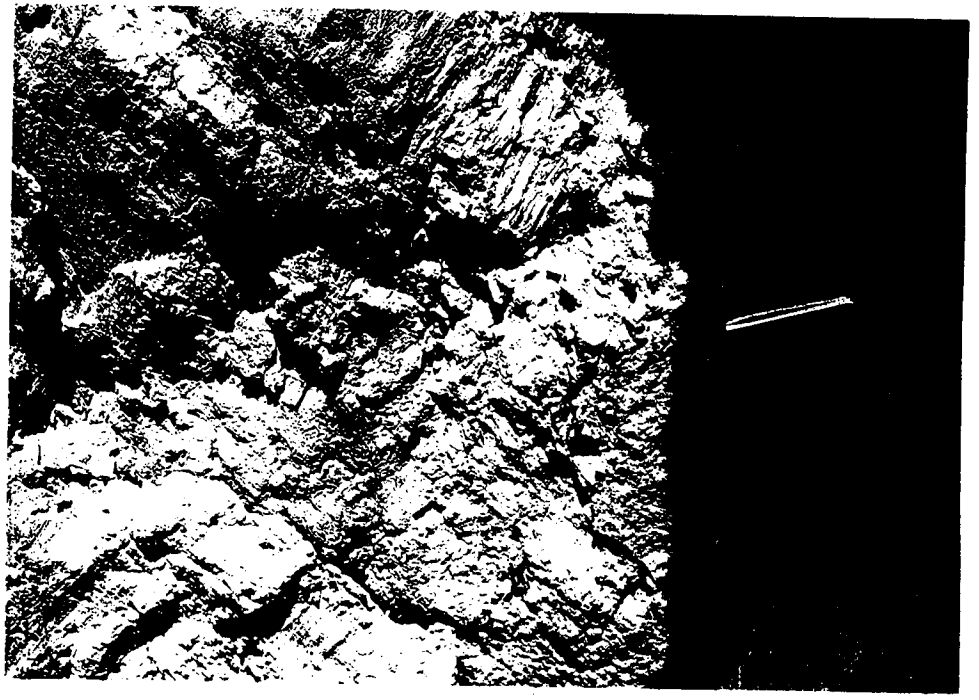
MAJOR FAULT TRACE
(IS SHOWN AS APPARENT DIP)

NOTES:

1. SLICKENSIDE LOCATION AS SHOWN ON FIGURE 3.
2. MAJOR FAULT RUNS PARALLEL TO THE PAGE.
3. PHOTOGRAPH WAS TAKEN FROM STATION 13 (SEE FIGURE 1).
4. THE BASAL PONCE IS CHARACTERIZED BY A CRYSTALLINE LIMESTONE BED.

CLIENT/PROJECT						TITLE		
BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			FAULT EXPOSURE NEAR GEOLOGIC BORING GW-9 (LOOKING NORTH)		
DRAWN RJS	CHECKED	REVIEWED	DATE 11/30/92	SCALE N.T.S.	JOB NO. 893-3803	FILE NO. 883-3643	DWG. NO / REV. NO.	FIGURE 2

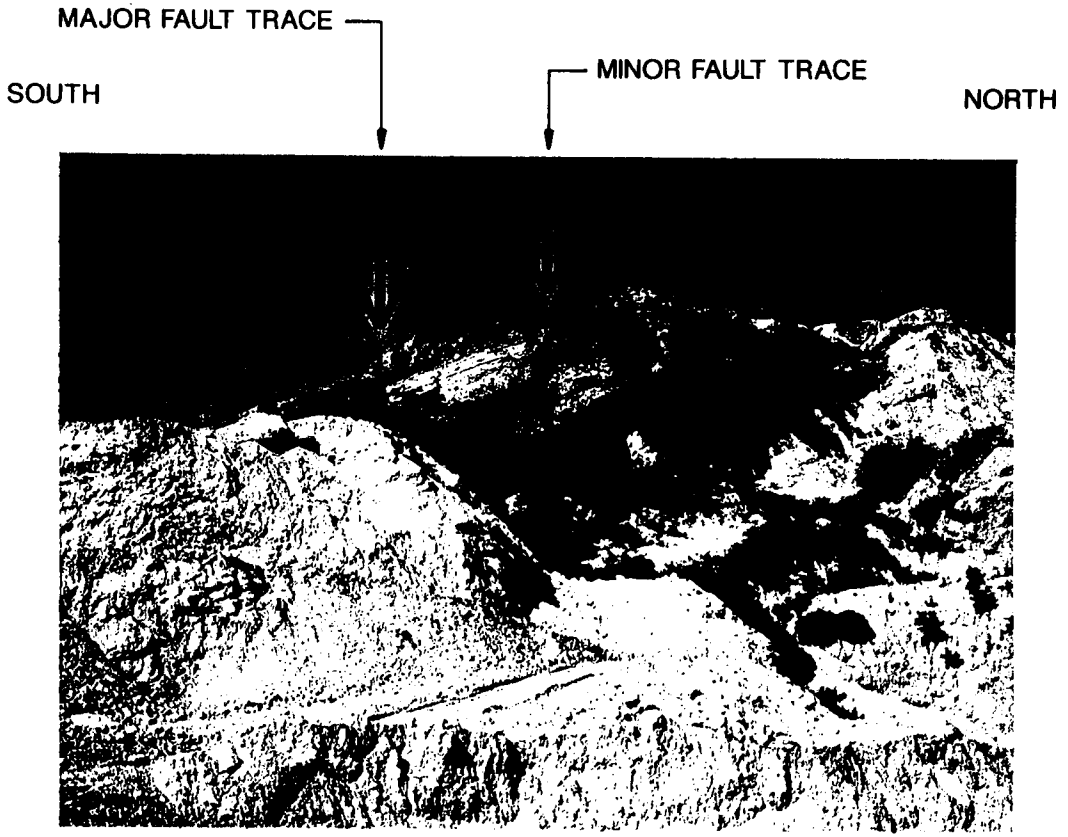
M77309



NOTE:

THE LOCATION OF THIS SLICKENSIDED EXPOSURE IS SHOWN ON FIGURE 2.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: SLICKENSIDES NEAR THE FAULT TRACE SOUTH OF GEOLOGIC BORING GW-9		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3



NOTES:

1. THE MAJOR FAULT TRACE DISPLACEMENT IS ESTIMATED TO BE APPROXIMATELY 70 METERS. THE MINOR FAULT TRACE DISPLACEMENT IS ESTIMATED TO BE APPROXIMATELY 3 METERS.
2. FAULTS RUN PERPENDICULAR TO THE PAGE.
3. PHOTOGRAPH WAS TAKEN FROM STATION 12 (SEE FIGURE 1).

CLIENT/PROJECT								
BFI OF PONCE, INC.	Golder Associates Atlanta, Georgia					TITLE: FAULT TRACES NEAR GEOLOGIC BORING GW-9 (LOOKING WEST)		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 4

R7/7309

ATTACHMENT 1

RECORD OF DRILLHOLE GW-9

Sheet 1 of 2

PROJECT: BFI/PHASE II
PROJECT NO: 893-3803.4
LOCATION: PONCE, P.R.

BORING METHOD: REVERSE CIRCULATION
DRILLING DATE: 10/29-30/92
DRILL RIG: DUAL TUBE

DATUM: MSL
COORDINATES N: 19,500
AZIMUTH: NA

COLLAR ELEV: 95.25
E: 129,120
INCLINATION: -90

J-Joint, F-Fault, S-Shear, B-Bedding, F-Foliation
PL-Planar, C-Curved, U-Undulating, ST-Stepped, I-Irregular
P-Polished, K-Slikensided, SM-Smooth, R-Rough, VR-V. Rough

DEPTH SCALE (FEET)	DESCRIPTION	GRAPHIC LOG	ELEV / DEPTH (FT)	RUN NO.	CORE RECOVERY	RQD 60 40 20	FRACTURES PER FOOT 2 4 6 8 10	DISCONTINUITY DATA: DIP wrt CORE AXIS 0 30 60 90	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	DISCONTINUITY DATA: GRAPHIC LOG	WEATHERING INDEX: SW FR, MW, HW, CW	STRENGTH INDEX: R6, R5, R4, R3, R2, R1	POINT LOAD INDEX (psi): RT 30, R2 150, R3 300, R4 800, R5 1500, R6	TEST ORIENTATION	NOTES WATER LEVELS INSTRUMENTATION
0	0.0' - 285.0' PONCE FORMATION: Pale yellowish-orange, fossiliferous LIMESTONE COBBLES and GRAVEL, some/and fine to coarse sand and silt.		95.25												Dry from approximately 0 to 282 ft. BGS.
			0.00	1	100 %										
			85.25												
10			10.00	2	100 %										More coarse limestone gravel from 18 to 20 ft. BGS.
			75.25												
20			20.00	3	100 %										
			85.25												
30			30.00	4	100 %										Very pale orange and very fossiliferous (colonial coral) from 35 to 40 ft. BGS.
			55.25												
40			40.00	5	100 %										
			45.25												
50			50.00	6	100 %										
			35.25												
60			60.00	7	100 %										
			25.25												
70			70.00	8	100 %										
			16.25												
80	1' Very stiff, yellow-orange CLAY, slightly damp, fossiliferous. (CH)		80.00	9	100 %										
			5.25												
90	Pale to very pale yellowish-orange, fossiliferous LIMESTONE COBBLES, GRAVEL, and sandy silt, trace clay.		90.00	10	100 %										
			-4.75												
100			100.00	11	100 %										
			-14.75												
110			110.00	12	100 %										
			-24.75												
120			120.00	13	100 %										
			-34.75												
130			130.00	14	100 %										
			-44.75												
140			140.00	15	100 %										
			-54.75												
150			150.00	16	100 %										
			-64.75												
160			160.00												

DEPTH SCALE: 1 in = 20 ft
DRILLING CONTRACTOR: CHT, INC.
DRILLER: W. JAMISON

LOGGED: WGG/FMB
CHECKED:
DATE:

Golder Associates

RECORD OF DRILLHOLE GW-9

Sheet 2 of 2

PROJECT: BFI/PHASE II
PROJECT NO: 893-3803.4
LOCATION: PONCE, P.R.

BORING METHOD: REVERSE CIRCULATION
DRILLING DATE: 10/29-30/92
DRILL RIG: DUAL TUBE

DATUM: MSL
COORDINATES N: 19,500
AZIMUTH: NA

COLLAR ELEV: 95.25
E: 129,120
INCLINATION: -90

J-Joint, F-Fault, S-Shear, B-Bedding, F-Foliation
PL-Planar, C-Curved, U-Undulating, ST-Stepped, I-Irregular
P-Polished, K-Slikensided, SM-Smooth, R-Rough, VR-V. Rough

DEPTH SCALE (FEET)	DESCRIPTION	ELEV / DEPTH (FT)	RUN NO.	CORE RECOVERY	RQD	FRACTURES PER FOOT	DISCONTINUITY DATA: Dif wrt CORE AXIS	DISCONTINUITY DATA: TYPE AND SURFACE DESCRIPTION	WEATHERING INDEX	STRENGTH INDEX	POINT LOAD INDEX (psi)	TEST ORIENTATION	NOTES WATER LEVELS INSTRUMENTATION
160	Very Pale yellowish-orange, fossiliferous LIMESTONE COBBLES, GRAVEL, and sandy silt, trace clay.	-64.75											
		160.00	17	100 %									
170		-74.75											
		170.00	18	100 %									
180		-84.75											
		180.00	19	100 %									
190		-94.75											
		190.00	20	100 %									
200		-104.75											
		200.00	21	100 %									
210		-114.75											
		210.00	22	100 %									
220		-124.75											
	Stiff, yellowish-orange CLAY, some fine to coarse sand, trace silt.	220.00	23	100 %									
		-131.75											
230	LIMESTONE COBBLES as above.	227.00											
		230.00											
	Dark yellowish-orange, fine to coarse SAND, little silt, calcareous.	232.00	24	100 %									
240		-146.75											
	Medium brown, fine to coarse SAND and CLAY, some gravel, some cobbles, calcareous.	242.00	25	100 %									
250		-156.75											
	Dark gray, fine SAND, little silt, fossiliferous.	252.00	26	100 %									
		-166.75											
260		262.00	27	100 %									
		-176.75											
270		272.00	28	100 %									
		-186.75											
280	Bottom of PONCE FORMATION.	282.00											Wet at approximately 282 ft. BGS.
		-189.75											
	JUANA DIAZ FORMATION: Greenish gray, interbedded SILT and SILTSTONE, little fine to coarse sand and gravel.	285.00	29	100 %									
290		-196.75											
		292.00	30	100 %									
300		-206.75											
	BOREHOLE TERMINATED AT 302 FT.	302.00											Water discharge from cyclone at the end of the last run.
310													
320													

DEPTH SCALE: 1 in = 20 ft
DRILLING CONTRACTOR: CHT, INC.
DRILLER: W. JAMISON

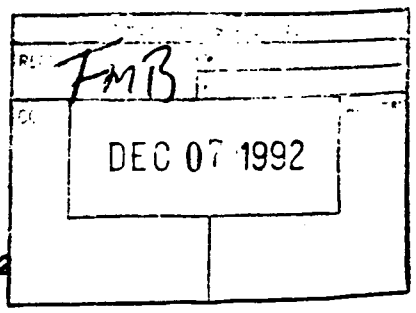
LOGGED: WGG/FMB
CHECKED:
DATE:

Golder Associates

ATTACHMENT 2

R.M. & Asociados
P.O. Box 426
Coto Laurel, P.R. 00780-0426
844-2712

November 30, 1992



Golder Associates Inc.
Frederick M. Booth, P.G.
Proj. Geological Engineer
3730 Chamblee Tucker Road
Atlanta, Georgia 30341

Re: Surveying Services
Ponce Municipal LandFill,
Ponce, P. R.

CERTIFICATION

As required by Mr. Rick Booth on October 14, 1992, I performed the survey work at the Browning Ferris Municipal LandFill in Ponce, P. R.

I certify that the "RCRA" monitoring well, (GW-9), horizontal and vertical location, is in ± 0.1 feet of accuracy. The horizontal control is referred to the mean sea level. Also this survey work is referred to the originals control points established on the landFill by José Luis Irizarry, civil engineer lic. 4420.

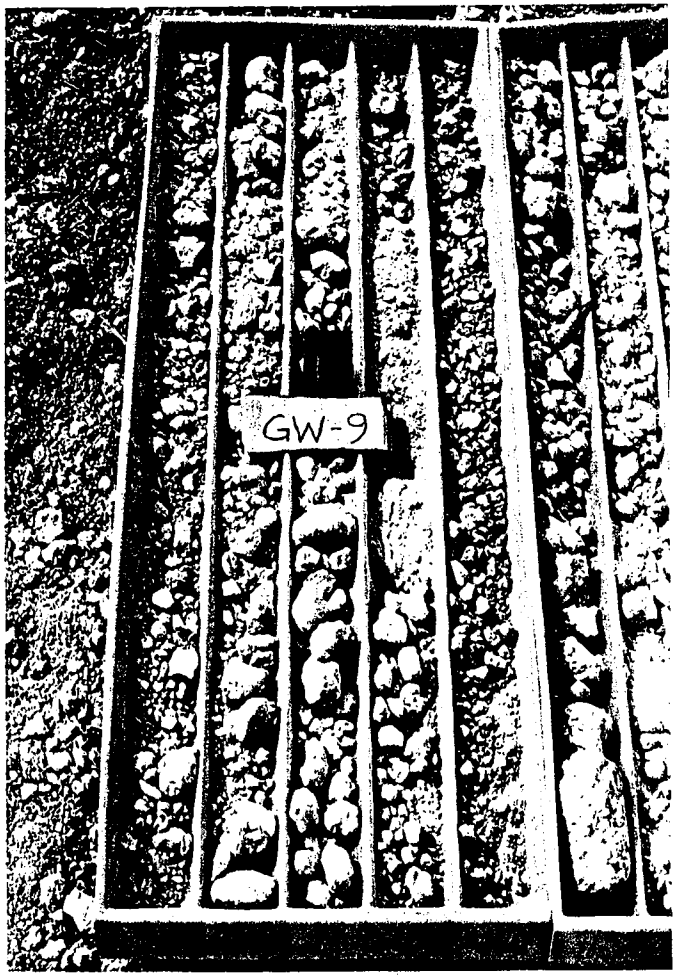
RCRA MONITORING WELL LOCATION

Point	Northing	Easting	Ground Elevation
GW-9	19,500.00	129,120.00	95.25

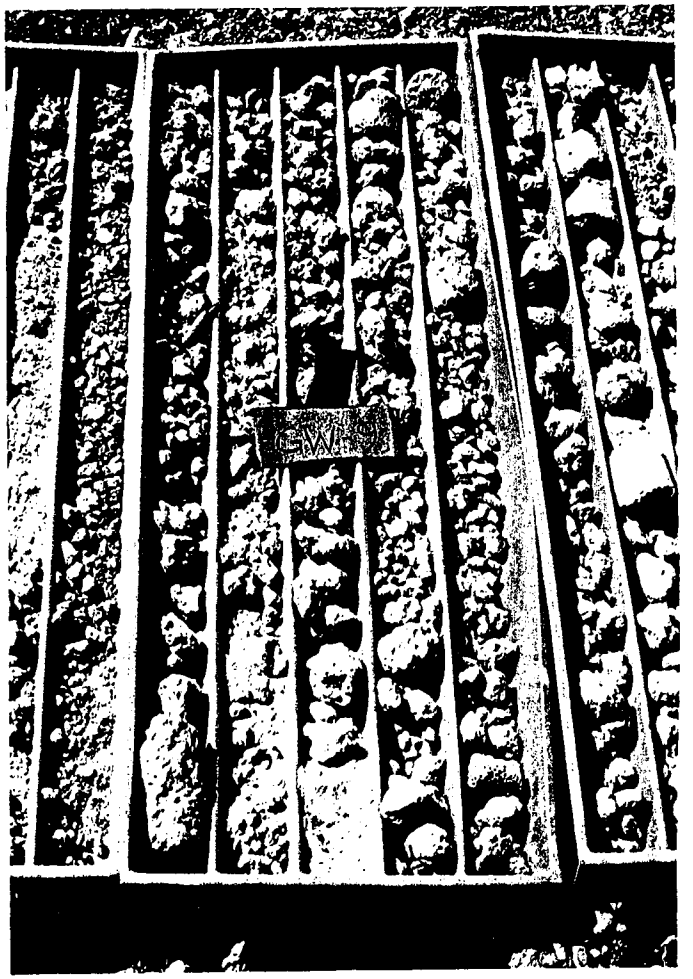
Rafael Mojica Torres
Registered Land Surveyor
Lic. No. 9318

RMT/alo

ATTACHMENT 3



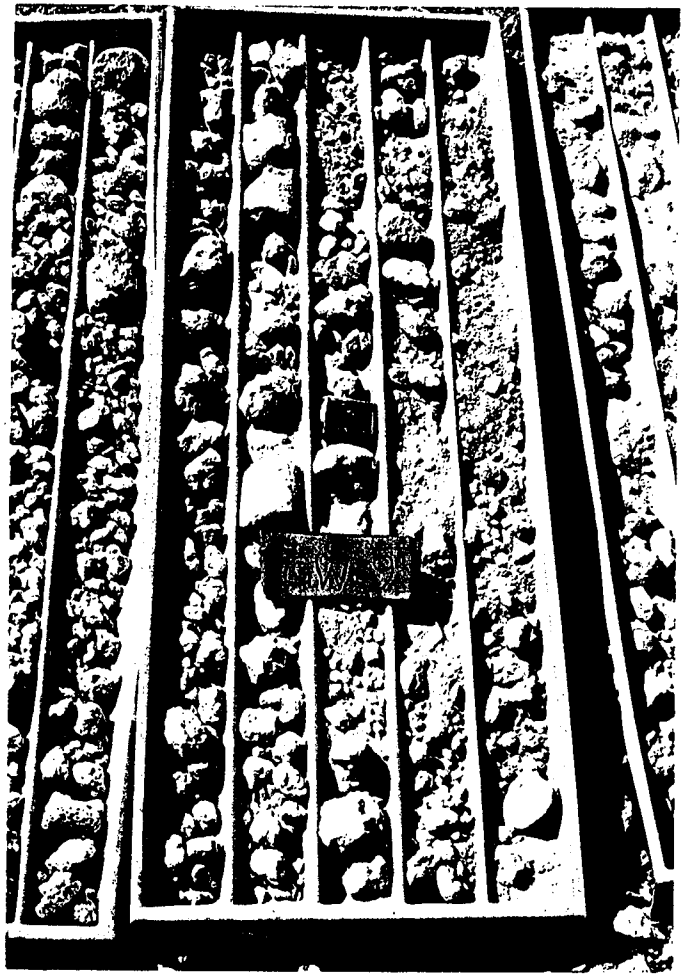
0 - 20 FT. BGS, BOX 1 OF 15



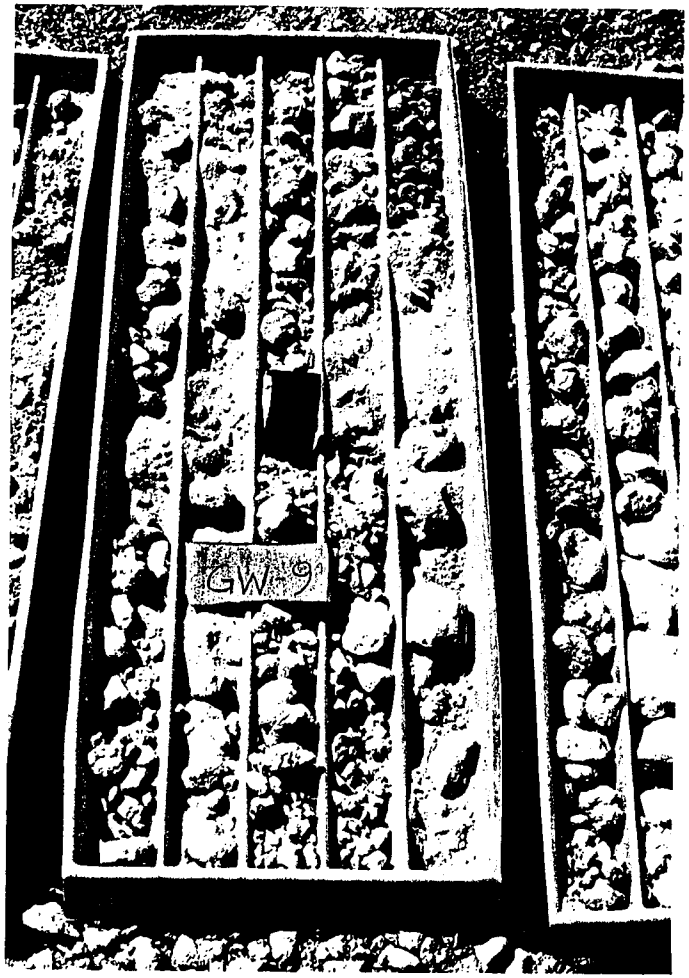
20 - 40 FT. BGS, BOX 2 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT								
BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN RJS	CHECKED	REVIEWED	DATE 11/30/92	SCALE N.T.S.	JOB NO. 893-3803	FILE NO. 883-3643	DWG. NO / REV. NO.	FIGURE 3-1



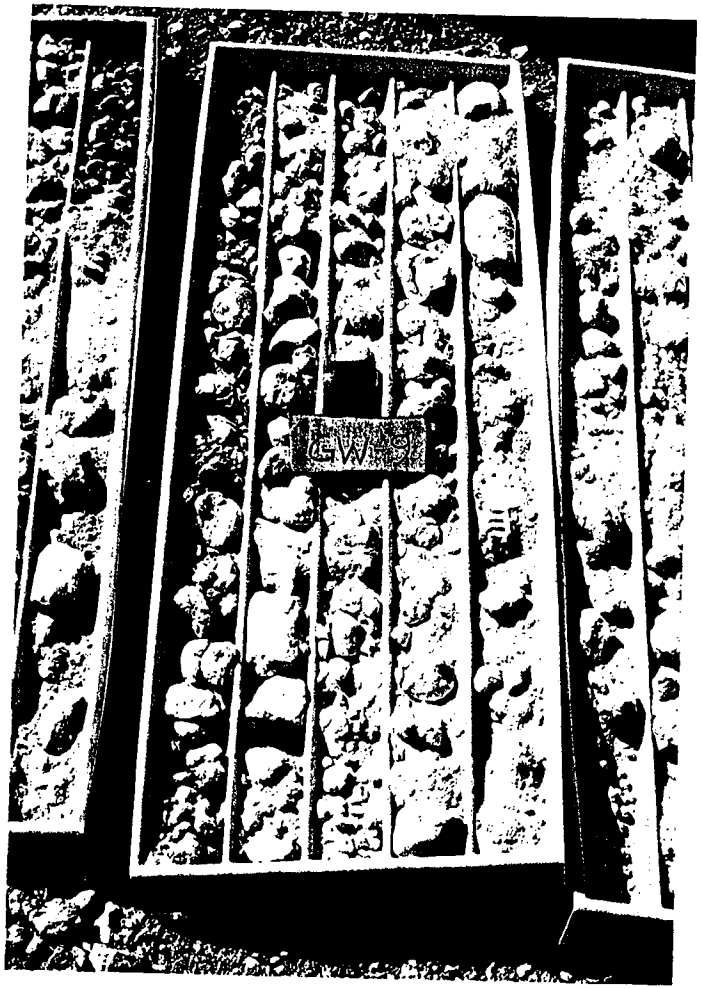
40 - 60 FT. BGS, BOX 3 OF 15



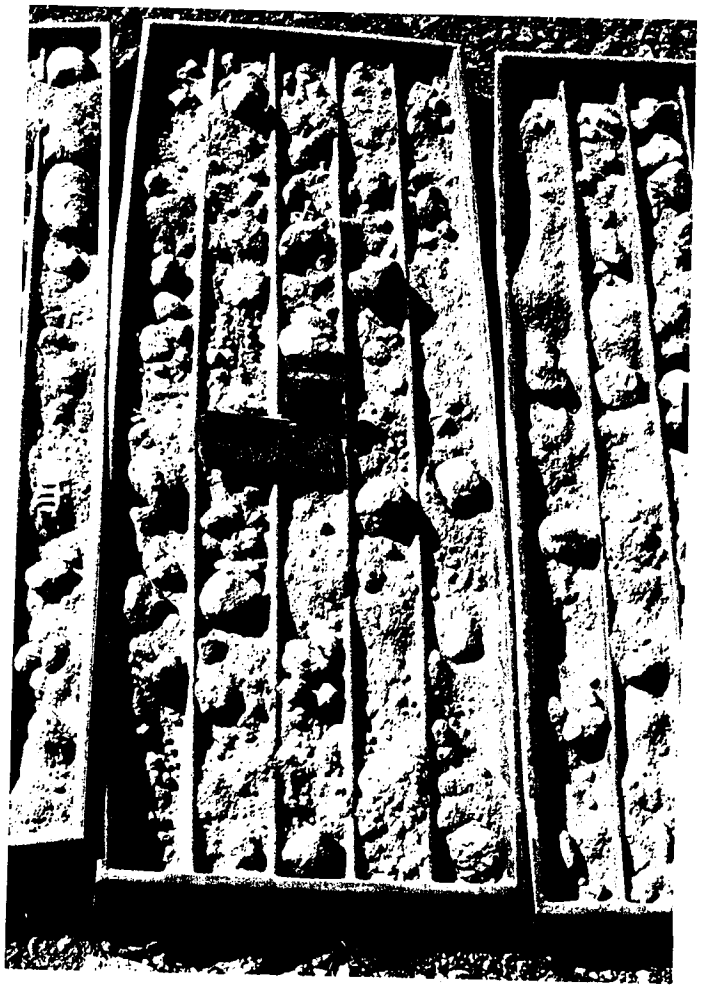
60 - 80 FT. BGS, BOX 4 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT								
BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-2



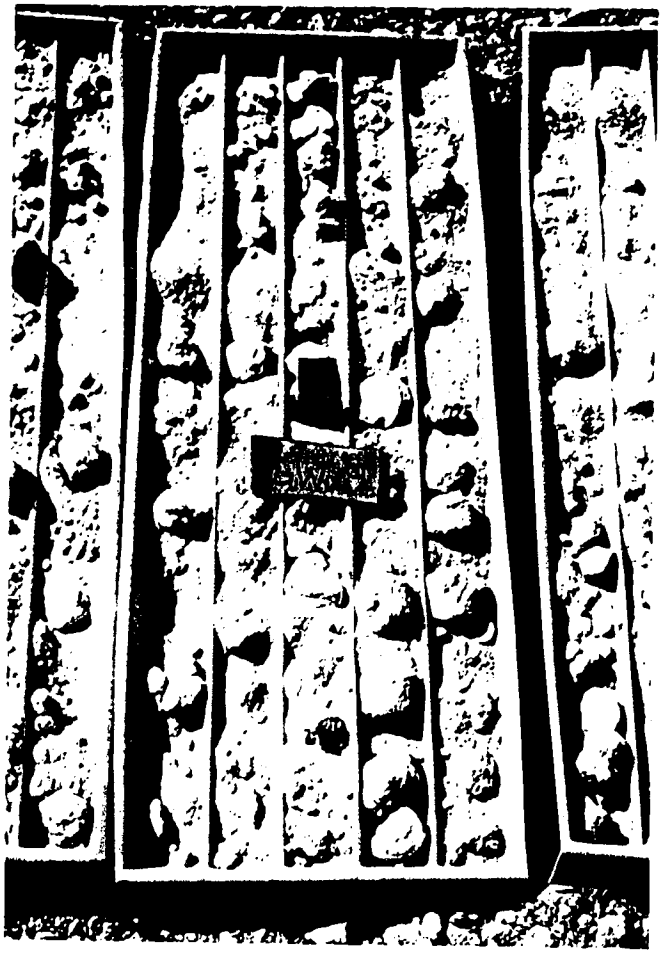
80 - 100 FT. BGS, BOX 5 OF 15



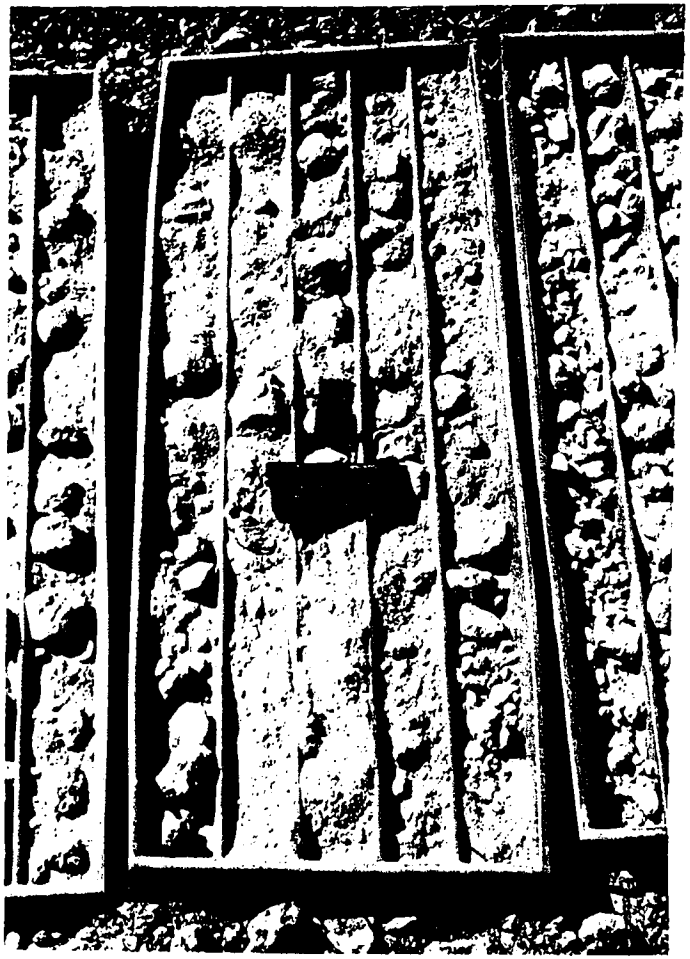
100 - 120 FT. BGS, BOX 6 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-3



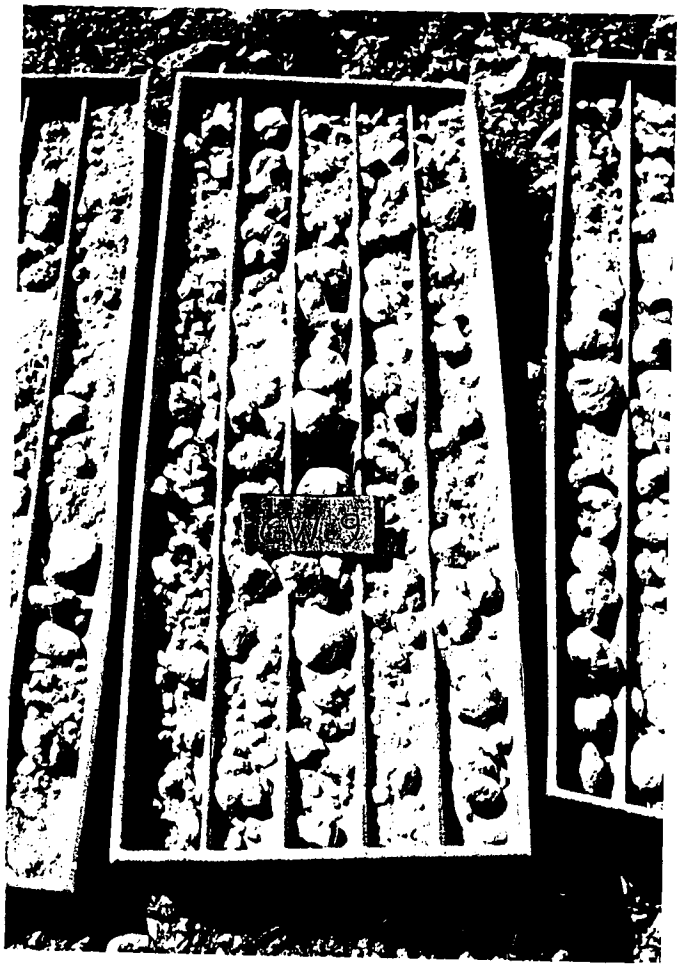
120 - 140 FT. BGS, BOX 7 OF 15



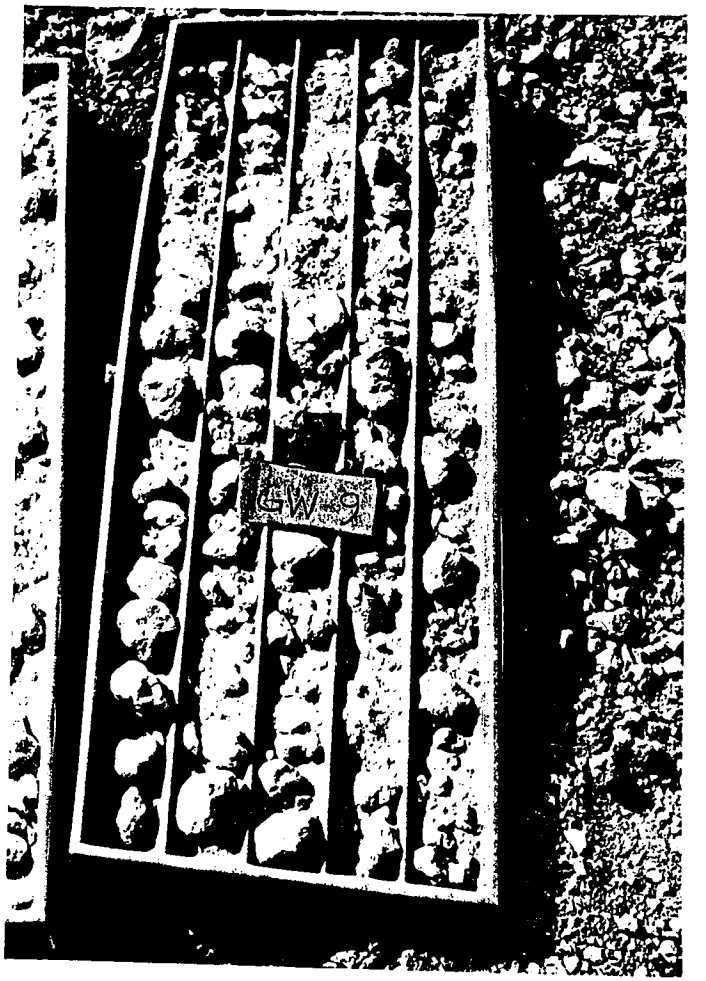
140 - 160 FT. BGS, BOX 8 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT								
BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-4



160 - 180 FT. BGS, BOX 9 OF 15



180 - 200 FT. BGS, BOX 10 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-5

N77309

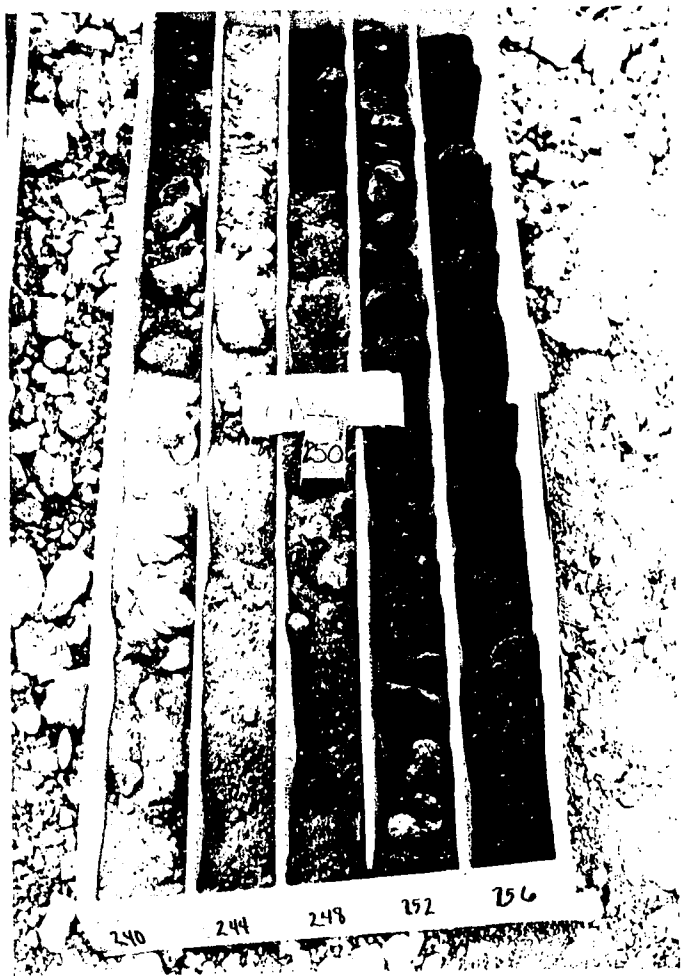
200 - 220 FT. BGS, BOX 11 OF 15

220 - 240 FT. BGS, BOX 12 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-6

M77309



240 - 260 FT. BGS, BOX 13 OF 15

260 - 280 FT. BGS, BOX 14 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPHS		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-7

N77309

280 - 300 FT. BGS, BOX 15 OF 15

NOTE: FT. BGS = FEET BELOW GROUND SURFACE.

CLIENT/PROJECT: BFI OF PONCE, INC.			Golder Associates Atlanta, Georgia			TITLE: GEOLOGIC BORING GW-9 ROCK CORE PHOTOGRAPH		
DRAWN: RJS	CHECKED	REVIEWED	DATE: 11/30/92	SCALE: N.T.S.	JOB NO.: 893-3803	FILE NO.: 883-3643	DWG. NO / REV. NO.	FIGURE: 3-8

N77309